

stage C cancer; selected cases of potentially aggressive stage A disease; patients with high grade diffuse and bilobular stage B cancer; and patients who have residual or recurrent cancer after radical prostatectomy or trials of estrogen therapy.

WILLIS J. TAYLOR, MD

REFERENCES

- Perez CA: Radiation therapy in the management of carcinoma of the prostate. *Curr Probl Cancer* 1:30-41, Nov 1976
- Pistenma DA, Bagshaw MA, Ray GR: The role of megavoltage radiation therapy in the treatment of prostatic carcinoma. *Semin Oncol* 3:115-122, Jun 1976
- Taylor WJ: Radiation oncology: Cancer of the prostate. *Cancer* 39:856-861, Feb 1977

Long-Term Indwelling Foley Decatheterization and Bladder Rehabilitation In Spinal Injury Patients

IN 40 MEN with spinal injuries whose mean age was 41.4 years (range 22 to 68), indwelling catheters had been in place for a mean period of 7.6 years (range 1 to 24) following spinal injury. There were 21 tetraplegics, 14 paraplegics and 5 with cauda equina lesions (all clinically complete lesions). All presented for urodynamic evaluation and possible removal of indwelling catheters. All patients had long-standing urinary tract infections. All tetraplegics and high paraplegics had varying degrees of autonomic dysreflexia. After hospital admission, intermittent catheterization was started on all patients; however, tetraplegic patients with previous history of autonomic dysreflexia were also given anticholinergics to reduce frequency of catheterization. Urinary tract infection was controlled with an appropriate antibiotic, and bladder irrigations with neosporin genitourinary irrigant solution. Cystomanometry, sphincter electromyography, urethral pressure profile and voiding cystourethrographic studies were done only after patients had been on intermittent catheterization for a minimum period of 48 hours but usually after seven days. There were 12 patients (30 percent) in whom vesicoureteral reflux was noted (possibly indwelling catheter had been left in due to reflux). Eight patients (20 percent) had been treated for bladder and renal stones on several occasions. In 18 patients simultaneous cystomanometry and periurethral striated electromyography showed detrusor-sphincter dyssynergia.

Indications for transurethral extended sphincterotomy in this group of patients included the following: (1) detrusor-sphincter dyssynergia, (2) vesicoureteral reflux, (3) inability to open bladder neck and posterior urethra on voiding cystoure-

thrography. In 33 patients transurethral sphincterotomy was done. There were seven patients in whom transurethral sphincterotomy was repeated because high residual urine persisted. No surgical operations were done in seven patients; in three in this group it was recommended, but patients deferred surgical therapy. Follow-up (six months to four years) shows pronounced improvement in general well-being, no recurrence of bladder stones, amelioration of autonomic dysreflexia and notable improvement in vesicoureteral reflux. At the last follow-up, there were positive urine cultures in six patients (15 percent). All patients were receiving prophylactic medications, either trimethoprim/sulfamethoxazole (Septra) or methenamine mandelate (Mandelamine) and ascorbic acid.

INDER PERKASH, MD

REFERENCES

- Perkash I: Intermittent catheterization failure and an approach to bladder rehabilitation in spinal cord injury patients. *Arch Phys Med Rehabil* 59:9-17, Jan 1978
- Perkash I: Detrusor-sphincter dyssynergia and dyssynergic responses: Recognition and rationale for early modified transurethral sphincterotomy in complete spinal cord injury lesion. *J Urol* 120:469-474, Oct 1978

Conservative Treatment of Early Carcinoma of the Prostate: Comparison of Patients Less Than 70 Years Old With Those 70 or Older

A RETROSPECTIVE COMPUTERIZED STUDY was made of 155 patients first seen between 1930 and 1967 with early (stages A and B) prostatic carcinoma in whom endocrine therapy, either immediate or delayed, had been carried out. The patients were divided into two groups: (1) Patients less than 70 years old when the first diagnosis of carcinoma was made and (2) those 70 years old or older. The crude 10-year or longer survival rate of group 1 (66 percent) was only slightly less than the expected survival rate (71 percent) of that age group (mean age 60 years) but there was a significantly greater difference in the survival rate in the 15-year or longer (42 percent versus 54 percent) and the 20-year or longer (23 percent versus 35 percent) periods. The crude 10-year or longer survival rate of group 2 (70 years old or older) was 37 percent (expected survival, age 78, was 25 percent). The crude 15-year or longer survival rate (16 percent) and 20-year or longer survival rate (7 percent) was also better than the expected survival (7 percent 15-year and 1 percent 20-year).

Probable explanations for the crude survival

rate of this group being better than the expected survival rate are as follows: (1) These were all private patients and were in better health than the same group in the general population and (2) they were examined at six-month to one-year intervals and any other medical problems were taken care of as they arose. Other reports have shown a better survival rate in elderly patients with early carcinoma of the prostate than in their comparison population. It is evident from these data that endocrine therapy, either immediate or delayed, is preferable for men 70 years or older who have early prostatic cancer.

ROGER BARNES, MD
HENRY HADLEY, MD
PAUL AXFORD, MD
STEPHEN KRONHOLM, MD

REFERENCES

- California State Life Tables 1959-1961, *In* Life Tables: 1959-1961, Vol 2, No 5, Jun 1966, US Department of Health, Education and Welfare. Public Health Service, p 63.
Hanash KA Utz DC, Cook EN, et al: Carcinoma of the prostate: A 15-year followup. *J Urol* 107:450-453, Mar 1972

Prostate Carcinoma/Therapeutic Considerations in the Management of Gross Lymph Node Metastases

PRIMARY PROSTATE CARCINOMA can usually be controlled by megavoltage radiotherapy. Unfortunately, in many patients so treated, distant metastases later occur. The percentage of distant metastases has paralleled the expected incidence of lymph node metastases. In recent years, surgical and radiotherapeutic efforts have been expanded to include the treatment of the lymph nodes. In some patients with minimal spread, control has been achieved. In most patients with gross lymph node metastases distant metastases continue to develop. Probably neither therapeutic approach alone can effectively eradicate extensive lymph node metastases. Surgical therapy cannot encompass all lymph node disease. Radiotherapy directed to the lymph nodes is limited to 5,000 rads because of small intestine tolerance. While this dosage can sterilize micrometastases, it cannot be expected to sterilize gross lymph node metastases. If the disease in the lymph nodes is comparable to the primary tumor, dosages of 6,000 to 7,000 rads would be needed.

For the past eight years we have explored the use of estrogens and megavoltage irradiation in the management of patients with gross lymph node metastases. The diagnosis of gross lymph node metastases was made by lymphangiography or se-

lective lymph node biopsy. The usual lymphangiogram criteria for detection of lymph node metastases was not used because it has been shown to be inaccurate. Only patients with notably enlarged lymph nodes and abnormal lymph node architecture were included in the study. Estrogens were systematically given two months before radiotherapy and continued throughout radiotherapy. All patients received megavoltage radiotherapy to the primary tumor, pelvic and periaortic lymph nodes. The primary tumor received 6,500 rads and the pelvic and periaortic nodes 4,800 rads. In order to assess response to treatment, therapy with estrogens was discontinued within one year of completion of irradiation. The treatment regimen was well tolerated.

By using serial x-ray studies following lymphangiograms and serial computerized axial tomograms, we observed that estrogens can significantly reduce the tumor burden in lymph nodes. This may render radiation more effective at the modest and safe dosages that can be delivered. Following completion of radiotherapy, (18 of 25 patients) 72 percent of patients with gross lymph node metastases have remained free of disease. Follow-up computerized axial tomographic scans done at one and two years showed persistent favorable lymph node response. Eight percent are alive with disease. Twelve percent died from disease. Eight percent have been lost to follow-up. Our favorable results may be tempered as more patients are studied and followed longer. The experience does suggest that this treatment regimen can produce long periods of disease-free survival. The potential for cure exists.

NATHAN GREEN, MD
ABRAHAM GOLDSTEIN, MD
ROY WILBUR MELBYE, MD
JAMES MORROW, MD
RICHARD ONOFRIO, MD

REFERENCES

- Green N, Melbye RW, George FW 3d, et al: Radiation therapy of inoperable localized prostate carcinoma: An assessment of tumor response and complications. *J Urol* 111:662-664, May 1974
Green N, Melbye RW, Lipsett J, et al: Prostate carcinoma: Measures to improve therapeutic response and prevent complications. *Urology* 6:287-290, Sep 1975
Perez CA, Bauer W, Garza R, et al: Radiation therapy in the definitive treatment of localized carcinoma of the prostate. *Cancer* 40:1425-1433, Oct 1977

Orchiectomy After Presumed Estrogen Failure In Treatment of Carcinoma of the Prostate

TO REASSESS the value of bilateral orchiectomy in reversing the progressive spread and pain in those patients with carcinoma of the prostate who had previously responded well to estrogen therapy, we